Chapter 1

Organization and Program for Operational Safety; General

Purpose:

This chapter describes the application, responsibilities and requirements of operational safety as they pertain to DOE-RL operations and contractors.

Scope:

This *General* chapter covers those areas of the DOE-RL Organization and Program for Operational Safety which are not addressed by either the *Codes and Standards*, Chapter 2, or by *OSHA*, Chapter 3. Topics addressed are as follows:

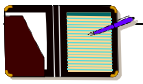
- Application
- Responsibilities
- Contract Requirements
- References
- Related Chapters
- Attachments

Application:

The DOE- RL safety and accident prevention program applies to all contractor and government operations and activities under the Hanford Operations Office of the Department of Energy. The program applies to other operations offices' activities at Hanford when DOE-RL has been assigned specific safety responsibilities for those activities.

Responsibilities:

The Functions, Responsibilities, and Authorities Manual (FRAM) for the Richland Operations Office (RL) applies only to RL organizations and staff. The purpose of the RL FRAM is to clearly define organizational responsibility, authority, and functions within RL for implementing requirements from DOE Directives and Federal and State laws, as well as requirements which flow down from the DOE M 411.1-1 "Manual of Safety Management, Functions, Responsibilities, and Authorities" to DOE Field Element Managers and Contracting Officers.



Establish ES&H Policy

The ES&H policy will be consistent with the DOE-RL policy adopted May 5, 1997. The DOE-RL policy for ES&H states:

> "The highest priority of the DOE-RL is to achieve daily excellence in protection of the worker and the public and in stewardship of the environment, both on and off the Hanford Site. By meeting the most rigorous standards, we will provide safe and healthful work places and protection of the environment in all RL activities. Fundamental to the attainment of this policy are personal improvement, worker involvement and full participation of all interested parties. Consistent with our Strategic Plan, we will reduce accidents, radiological and toxicological exposures, and regulatory non-compliances."

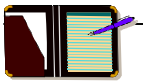
Integrated Environment, Safety and Health Management System Plan

The Integrated Environment, Safety and Health Management System (ISMS) Plan establishes a single, defined environment, safety and health (ES&H) management system that integrates requirements into the work planning and execution processes to effectively protect the workers, public, and the environment. The ISMS identifies a set of requirements that reflects DOE's commitment to a "standards based" safety program and the safety concepts reflected by these requirements.

The ISMS provides the mechanisms for increasing worker involvement in work planning, including hazard and environmental impact identification, analysis, and control; work execution; and feedback/improvement processes. Effective implementation of the ISMS incorporates the best practices and supports the accomplishment of the Voluntary Protection Program (VPP), Enhanced Work Planning/Hanford Occupational Health Process (EWP/HOHP), Responsible Care, and other ES&H performance improvement initiatives.

The ISMS consists of seven (7) Core Functions listed below and is based on the eleven (11) Guiding Principles defined in Chapter 2.

1. Establish ES&H Policy
2. Define Scope of Work
3. Identify Hazards and Requirements
4. Analyze Hazards and Implement Controls
5. Perform Work within Controls
6. Feedback and Improvement
7. Management Review



The ISMS at Hanford is the umbrella for all EH&H initiatives. It embodies VPP, the HOHP, EWP, EMS/ISO14000, TPA, NEPA, Responsible Care, and all other ES&H system for the Hanford site that will change the culture of Hanford and enable significant ES&H performance improvements over the coming years, …PROVIDED we work aggressively with our line management and contractor partners at its implementation.

Objectives of the ISMS

The primary objective of the ISMS is to systematically integrate ES&H into work management and practices at all levels of work planning and execution such that the Project Hanford Site mission is accomplished while protecting the workers, public, and the environment.

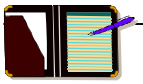
Supporting objectives of the ISMS are to:

1. Identify PHMC Team processes that will effectively integrate safety and environmental protection into work planning and execution throughout of the PHMC.
2. Establish mechanisms to flow down ES&H requirements to PHMC Team and lower tiered subcontractors, such that work activities are conducted in accordance with the applicable contractual and requirement basis documents.
3. Improve work efficiency, safety and environmental protection by involving workers early in the work planning process.
4. Define expectations with respect to work planning, hazard and environmental impact identification, analysis, and control, at the PHMC Scope, Facility, and Activity levels.
5. Address DOE, Tribal Government, stakeholder, and end-user needs for protection of the workers, public, and the environment.

Guiding Principles of the ISMS

In support of accomplishing the Hanford Site mission, the PHMC Team subscribes to the following Guiding Principles for ES&H management. These Guiding Principles are attributes (i.e. values) of the ISMS and are achieved through execution of the mechanisms, processes, and procedures that satisfy the ISMS expectations and implement the Core Functions. Those programs, standards, policies, and initiatives that contributed to establishing these Guiding Principles are shown in parentheses.

1. Line Management Responsibility for Safety and Environmental Performance Defined (DOE P 450.4/VPP/EWP/RC)



Line management is directly responsible for protecting the workers, the public, and the environment.

a) Line management involves ES&H professionals and workers in the work planning process including hazard and environmental impact identification, analysis, and development of controls.
b) ES&H requirements are incorporated into the work planning process applying a Job Hazard Analysis (JHA) system.
c) Line management visibly demonstrates their commitment to, and responsibility for, safety and environmental protection by routinely being present in the work place and by being responsive to worker safety concerns.
d) ES&H improvement goals and objectives are established and documented.
e) ES&H goals and objectives are incorporated into employee performance goals.
f) Line management provides the necessary resources to protect the workers, public, and the environment.

2. Clear Roles and Responsibilities Defined (DOE P 450.4/ISO 14001/VPP/RC)

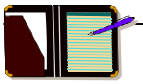
   Clear and unambiguous lines of authority and responsibility for ensuring ES&H performance are established, documented, and communicated at all organizational levels to achieve effective safety and environmental management.

   a) ISMS expectations are met through established contract mechanisms.
   b) Major subcontractors share the responsibility for the safety of the PHMC Team work force including lower tiered subcontractors working on PHMC scope.
   c) Major subcontractors are responsible for environmental protection during the performance of work.
   d) Roles and responsibilities are defined in FDH policies and procedures.

3. Competence Commensurate with Responsibilities (DOE P 450.4/ISO 14001/VPP/EWP)

   Personnel possess the experience, knowledge, skills and abilities that are necessary to discharge their responsibilities:

   a) Personnel participate in the work planning process (hazard and environmental impact identification, analysis, and control) within their abilities, experiences, knowledge, and skill level.
   b) Worker qualification and training requirements relevant to work being performed are identified and satisfied before work is started.



4. Balanced Priorities (DOE P 450.4)

   Protecting the workers, the public, and the environment is a priority whenever work activities are planned and performed.
   a) Work performance is based on risk-informed planning.
   b) ES&H scope, funding and performance are considered an integral part of project planning.
   c) Resources are available to effectively address ES&H goals and objectives.
   d) Safe, environmentally protective work practices are not compromised to achieve operational milestones.

5. Safety and Environmental Standards and Requirements Identified (DOE P 450.4/ISO 14001/HOHP/RC)

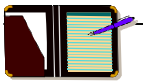
   Before work is performed, the hazards and environmental impacts are identified and ES&H standards and requirements are established.
   a) Standards and requirements applicable to the hazards and environmental impacts of activities are identified.
   b) Procedures and processes are established and maintained to identify and analyze safety hazards and environmental impacts of activities.

6. Hazard Controls Tailored to Work Being Performed (DOE P 450.4/VPP/EWP/HOHP)

   Engineering and administrative controls to prevent and mitigate hazards are tailored to the work activity being performed.
   a) Operations and activities with identified hazards and environmental impacts are performed within planned and analyzed conditions.
   b) Use of appropriate commercial standards and practices is encouraged.

7. Operations Authorization (DOE P 450.4/ISO 14001)

   The conditions and requirements for the safe and environmentally protective execution of work are established and clearly communicated.
   a) Facility Authorization Envelope clearly establishes the requirements and controls necessary prior to authorization of facility operations.



b) Pre-job briefings are used to communicate hazard and environmental impact information, work controls, and actions to be taken in case of an emergency.
c) The worker is the final check for work to proceed safely.

8. Worker Involvement (VPP/EWP)

   Workers are actively involved in preparing for work, including planning, hazard and environmental impact identification and analysis, implementation of controls, and readiness review.
   a) A team approach to work planning, work execution, and continuous improvement, that encourages early worker involvement is applied.
   b) Each worker has the right, responsibility, and authority to report unsafe or environmentally unsound conditions or practices and stop work without fear of reprisal.

9. Communication and Stakeholder Involvement (RC/ISO 14001)

   Open and effective internal and external communication supports management of ES&H issues and initiatives.
   a) Processes and procedures are established and maintained for guiding internal communication between the various levels and functions of the PHMC Team, and for conducting external communication with regulatory agencies, community members, and stakeholders.
   b) Community members and other stakeholders participate in the decision-making processes that establish FDH ES&H priorities and budget allocations.

10. Continuous Improvement (DOE P 450.4/ISO 14001/VPP/RC)

    Workers, supervisors, and management continually check the adequacy of work processes, procedures, equipment, and correct deficiencies when identified.
    a) ISMS implementation is periodically assessed and assessment results are used for performance feedback for continuos improvement.
    b) Post-job briefings are conducted to support continuous improvement.
    c) Lessons learned serve as a primary feedback mechanism for identification of deficiencies and necessary corrective actions.

11. Senior Management Involvement (ISO 14001/VPP/RC)

    Senior management is actively engaged in the implementation and improvement of the ISMS.

a) Senior management establishes an ES&H policy that commits to full implementation of the ISMS, continuous improvement, compliance with applicable laws and regulations, and setting goals and objectives for improved ES&H performance.
b) Senior management provides ISMS direction based on performance feedback analysis.

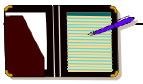
Organization and Mission of DOE-RL Offices

The mission of RL is to clean up the Hanford Site, provide scientific and technological excellence to meet global needs, and partner in the economic diversification of the region. The missions of the major RL organizations are described below.

1. *Office Of The Manager:* The Office of the Manager (MGR) is responsible for managing the Department of Energy's Hanford activities and reports to the Associate Deputy Secretary for Field Management. They manage all activities of the Hanford Site and represent the Department's interests in the States of Washington, Oregon, and Alaska. Responsible for the accomplishment of the RL Mission which is to assure a safe, secure, and environmentally sound operation in all areas of interest, while complying with all applicable Federal, State and local laws, regulations and other requirements; protecting the environment; and protecting the health and safety of DOE employees, contractor employees, and the general public.

2. *Assistant Manager For Environmental Restoration:* The Office of Assistant Manager for Environmental Restoration (AME) manages and oversees the Hanford Environmental Restoration Project to ensure effective performance by the Environmental Restoration Contractor with consideration to stakeholder input for near- and long-term planning; investigation, characterization, remedial design, and remedial action required for approximately 1,150 inactive waste sites; construction of associated treatment, storage, and disposal facilities; and the decontamination and decommissioning of over 200 surplus contaminated nuclear facilities including the safe, cost-effective surveillance and maintenance of these facilities.

3. *Assistant Manager For Facility Transition:* The Office of Assistant Manager for Facility Transition (AMF) develops, implements, and manages RL operating policies for site infrastructure support, landlord activities, and operating and transition facilities; formulates and executes programs for the management of projects at RL; and plans, coordinates, and manages program activities for the stabilization and transition of nuclear facilities from shutdown to



decontamination and decommissioning (D&D) and environmental restoration.

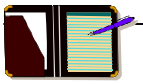
4. *Assistant Manager For Science And Technology:* The Assistant Manager for Science and Technology (AMT) provides operational and institutional oversight of the Pacific Northwest National Laboratory (PNNL); provides leadership for Technology Development (TD) programs; manages the Safeguards and Security programs; and supports the economic viability of the community and the region.

5. *Assistant Manager For Waste Management:* The Office of the Assistant Manager for Waste Management (AMW) develops and implements site waste management policies; manages waste management facilities; plans, coordinates, and manages program activities for solid waste, liquid effluents, analytical services, and transportation.

6. *Assistant Manager For Tank Waste Remediation System:* The Office of the Assistant Manager for Tank Waste Remediation System (TWRS) is responsible for the management and integration of the tank waste storage and tank waste disposal programs at Hanford. The primary mission of TWRS involves resolving several waste tank safety issues; operating the Resource Conservation and Recovery Act of 1976 treatment, storage and disposal facility, committed to maintaining safe storage; and characterizing, retrieving, treating, immobilizing and storing the waste until permanent disposal.

   Management of capital projects in support of TWRS activities is integrated into the mission. A cadre of Senior Technical Advisors provides a wide range of technical expertise and advise for TWRS senior management and line organizations. They assist in ensuring compliance with applicable laws, regulations, and requirements, including appropriate industry standards, strategic planning, safety issues, conducting investigations, and conduct of operations.

   The TWRS Program contributes to DOE's ability to permanently dispose of defense wastes by safe, environmentally acceptable, and cost-effective disposal methods. Program support to ensure that the Hanford Tank operations are conducted in compliance with applicable laws, regulations, and requirements, including appropriate industry standards, is provided by the TWRS Facility Representatives who oversee day-to-day tank farm operations.



7. *Assistant Manager For Business Management And Chief Financial Officer:* The Office of Assistant Manager for Business Management and Chief Financial Officer (CFO) develops, implements and manages RL programs for planning and integration, financial management and analysis, accounting, budget planning and execution, financial review and analysis, procurement and contract administration, and oversight of contractor financial and procurement activities. CFO has overall responsibility for obligating and disbursing funds and for advising management officials on financial management and contract administration matters; and providing planning guidance for a process that integrates all Hanford activities which lead to achieving the Hanford mission.

8. *Office Of Environment, Safety And Health:* The Office of Environment, Safety and Health (ESH) establishes environment, safety, quality, and health policies, standards, and guidelines in RL Directives; provides management and coordination for sitewide safety, quality, health, and environmental programs; provides technical support to other RL line management organizations; has RL line management responsibility for the Occupational Health Medical Contractor; and provides RL senior management with an independent assessment capability to assess the RL line organization and Hanford contractors.

9. *Office Of Human Resources Management:* The Office of Human Resources Management (HRM) is responsible to attract, develop, and retain a workforce that possesses the knowledge, skills, motivation, pride, and dedication that will assure the success of the Hanford Site's environmental management mission.

10. *Office Of Chief Counsel:* The Office of Chief Counsel (OCC) provides legal advice and counsel to RL and assists in the negotiation of the principal operating contracts and other significant matters affecting RL.

11. *Office Of External Affairs:* The Office of External Affairs (OEA) develops and assures implementation of RL public affairs programs and plans, directs, and coordinates RL institutional relations, media relations, general public relations, intergovernmental affairs, congressional relations, and consumer affairs programs. Ensures all communication and interaction with local governments, stakeholders, and Indian nations is consistent with public involvement plans. Additionally, the Office is responsible for the Freedom of Information and Privacy Act programs. There is no organizational substructure.

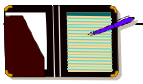
12. *Office Of Training:* The Office of Training (OTR) has responsibility for the development and maintenance of a high-quality, cost-effective, centralized training program for RL and Hanford contractors. OTR provides oversight and evaluation of contractors' training programs to assure that programs satisfy regulatory requirements and the needs of the RL customers and stakeholders, including the Defense Nuclear Facilities Safety Board (DNFSB) and other nuclear industry, safety, and environmental regulators. The primary focus is the development and implementation of a Hanford Training Program which is consistent with the DOE Implementation Plan for DNFSB Recommendation 93-3.

13. *Office Of Radiological, Nuclear, And Process Safety Regulation:* The Office of Radiological, Nuclear, and Process Safety Regulation (RNPS) provides for the independent safety regulation of TWRS Program privatized contractors. The TWRS program was established to manage, retrieve, treat, immobilize, and dispose of these wastes in a safe, environmentally sound, and cost-effective manner. This program represents one of the most significant technical, managerial, and public policy formulation challenges in the DOE waste management and restoration program.

14. *Fast Flux Test Facility Standby Project Office:* The Fast Flux Test Standby Project Office (SPO) was established to assist the RL Manager in the future mission of the Fast Flux Test Facility (FFTF), for the Department's tritium production strategy and the feasibility of using the FFTF for medical isotope production. SPO is responsible for program planning (including budgets and schedules), implementation, and reporting for all FFTF activities related to deactivation, standby operations, and studies and analyses.

Safety Management/Authorization Agreement

In response to DNFSB Recommendation 95-2, DOE has committed to establish safety management systems across the DOE complex. The Project Hanford Management Contract (HMC), issued in July 1996, required that the contractor prepare and submit for DOE approval an Environment, Safety and Health Management Plan which would address the implementation of a safety management system for HMC facilities. The system is to include the use of Authorization Agreements between DOE and its contractors to define terms and conditions for operation of major DOE facilities.



The plan will include a definition for Authorization Agreement and will address the process to be used for establishing an Authorization Agreement. Several requirements from DOE M 411.1-1 address the approval of Safety Management System documentation and Authorization Agreements. By memorandum dated February 21, 1997, from Thomas P. Grumbly to Operations Office Managers, DOE Headquarters transmitted a draft protocol for approval of safety management system documentation. The memorandum also stated that such documentation should not be approved until the protocol for review and approval is finalized. RL will establish mechanisms and assign responsibilities for these approvals once the protocol is finalized. The crosswalk for these requirements currently states "Pending approval of Safety Management System approval protocol."

Responsibilities And Authorities

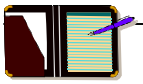
As stated above, the RL FRAM includes requirements which the RL Field Element Manager is responsible to satisfy. These requirements are in most cases broken down in the FRAM into functions, which serve as steps in implementing the requirements. In some instances these functions are performed by the Manager. In others, the function is performed at the Assistant Manager level.

The majority of functions, however, are performed at the division level by Division Directors and their staffs. In the cases where the Manager does not perform the function, the authority to perform the function has been delegated from the higher levels, and the individual performing the function is accountable to the higher management levels for accomplishing the assigned functions.

Delegations of authority are expected to be formally documented and records maintained for these designations. Delegations of authority for specific functions do not relieve the delegating officer of responsibility for the outcome of the function. The following criteria apply to delegations of authority:

1. delegations must be in writing with a copy provided to the designate (include circumstances under which the delegation may be exercised and conditions on further delegation),
2. delegations may be rescinded in writing at any time by the delegating authority, and
3. signature authority for documents should be clearly defined.

Within RL, delegations of authority from a Division Director to individuals should be defined in position descriptions or more detailed documents maintained by the Division Director. The RL FRAM frequently identifies more than one organization as responsible for performing a function. In



most cases the organizations are responsible for the function in the facilities or projects that their organization is responsible for managing.

One of the guiding principles included in DOE P 450.4 is that DOE line management is responsible for safety. In order to define line management for the two RL priority facilities, Spent Nuclear Fuel and Tank Farms, diagrams depicting line management, project management, and support functions were prepared and agreed to by line management.

RL Project Manager Responsibilities And Authorities

In general, Project Managers at RL report to Division Directors. The role of the Project Manager is to successfully execute a project and produce the required product(s) within the cost, schedule, technical, quality, and other constraints imposed on the project. The Project Manager has single point accountability and authority to execute the project. For functions which are the responsibility of the Division Director and which are specifically applicable to projects, the Project Manager may be delegated the authority to perform the functions. Delegation criteria from the preceding Section are applicable.

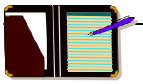
Authorities Of Contracting Officers And Contracting Officers Representatives In RL

Contracting Officers and Contracting Officers Representatives have the authority to take action related to Hanford cost reimbursement and time and materials contractors is assigned to the personnel identified below. Responsibility and authority to monitor contractor actions are identified in this document; however, only the following personnel have the authority to formally direct contractors.

RL employees must be extremely careful in dealing with subcontractors to RL contractors - directions to a subcontractor can only be provided by the company that awarded the contract or has been assigned responsibility to manage the contract. In dealing with RL contractors, RL employees should be aware of contractual requirements including the specific DOE and RL Directives that have been imposed on the contractor.

Authority Of Contracting Officer

1. Formally documented.
2. Enter into, administer, modify, and/or terminate contracts, financial assistance awards (grants and cooperative agreements), leases, and/or sales contracts.
3. Obligate the expenditure of public funds.



Authority Of Contracting Officer's Representative (COR) -Typical of those individuals at an Assistant Manager Level

1. Formally documented.
2. Approve baseline changes impacting multiple projects within assigned workscope.
3. Sign letters of direction to contractor(s).
4. Approve Annual Work Plans for work of a routine recurring nature funded by indirect budgets.
5. Sign correspondence to contractor(s) that involves work scope approval, redirection, work authorization, intra-program reprioritization, and change control actions within their assigned work scope.

Authority Of Contracting Officer's Representative (COR) - Typical of those individuals at a Division Director Level Or Project Manager

1. Sign routine program correspondence.
2. Approve baseline changes within assigned workscope.
3. Sign letters of direction within assigned workscope.

Planned RL FRAM Revisions

At the present time RL has two recently created Offices that have not been included in the RL FRAM. These Offices are the "Office of Radiological, Nuclear and Process Safety Regulation" (RNPS) and the "FFTF Standby Project Office (SPO)." The RNPS Office is responsible to the Manager for providing an independent regulatory like function for the tank waste privatization effort. As the scope and responsibilities of these two Offices are identified, the RL FRAM will be revised to include their functions and responsibilities.

The functions and authorities related to authorization agreements are in the process of being defined in the Operations Office. It is planned that a new functional area will be added to the RL FRAM when the scope and roles and responsibilities for this aspect have been established. This is expected to be accomplished within six months.

Union, Local 181

Issues that affect the RL employees shall be staffed through the local bargaining unit. Issues that have an affect on the worker (employee) are to be given to RL-Human Resources who will request review and input from the local union.

Other Responsibilities

It is the responsibility of the Safeguards and Security Division to:

1. Enforce traffic regulations within Government-controlled areas.
2. Maintain accident records and maps (Attachment 1) showing accident locations. Periodically observe traffic flow, speeds, and other traffic features to determine solutions for locations with high accident rates.
3. Investigate complaints, traffic hazards, and similar problems, and initiate corrective action as indicated or required (Attachment 2).
4. Locate and maintain traffic signs as prescribe in applicable codes. Study and review traffic signs at Hanford with emphasis on eliminating signs not essential to the traffic program.

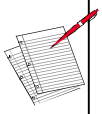
It is the responsibility of the RL Division Directors to:

1. Cooperate with the Environmental Safety and Health (ESH) Division to see that adequate, effective safety programs covering all work in their respective divisions are established. Safety problems should be part of the agenda during each regular Division staff meeting.
2. Ensure correction of safety deficiencies in both contract and Government work under their respective supervision.
3. Enforce all applicable safety regulations.

Contract Requirements:

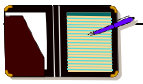
Contractor Safety Policy

1. Each contractor shall be responsible for establishing and maintaining an organization that will assure safe and healthful work places for every employee; and for the performance both old operations, including those of any subcontractor, in a manner that will minimize injury, illness, and damage to equipment, materials, and property.
2. Safety shall be an integral part of each job, and each employee shall be responsible for the safety aspects of his or her job. Enforcement of safety and fire prevention regulations shall be a supervisory responsibility.
3. Management acceptance of the responsibility for all aspects of safety shall be clearly stated in a written policy (Attachment 3). This acceptance shall be demonstrated by active management support of the safety program.



Contract Clause--Safety, Health, and Fire Protection

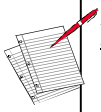
1. The Safety Contract Clause shall appear in the following categories of DOE contracts:



a) Contracts involving the use, operation, or construction of Government-owned or -controlled sites,[1] plants, laboratories, production facilities; or utilization of facilities.[2]
b) Contracts involving instructions or other services perform at Government-owned or -controlled sites or facilities.
c) Contracts involving use both DOE-owned particle accelerators not at Government-owned or -controlled sites.
d) Contracts other than categories (a) through (c) above, involving any non-licensed use or possession of source, by-product, or special nuclear material; or of production or utilization facilities.
e) Contracts other than categories (a) through (d) above, determined on an individual basis to involve special considerations warranting inclusion of the clause.
f) This cause should not be included in all DOE prime contracts, subcontracts, supply subcontracts, and purchase orders not falling within the above subsections (a) through (e).

2. The overall DOE and Contractor Safety Policy is reflected in the clause:

"The Contractor shall take all reasonable precautions in the performance of a work under this contract to protect the health and safety of employees and of members of the public and to minimize danger from all hazards to life and property, and shall comply with old health, safety, and fire protection regulations and requirements (including reporting requirements) of the DOE. In the event that the Contractor Contracting Officer may, without prejudice to any other legal or contractual rights of the DOE, issue an order stopping all or any part of the work; thereafter a start order for resumption of work may be issued at the discretion of the Contracting Officer. The Contractor shall make no claim for an extension of time or for compensation of damages by reason of or in connection with such work stoppage."

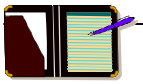


DOE and Contractor Safety Programs

1. Safety Organization Policy - DOE and Contractor safety and fire prevention organizations shall have the following objectives:
   a) The prevention of accidents and fires through the elimination or control of conditions or procedures capable of causing personal injuries, occupational disease, or unjustified radiation exposures; or damage to equipment, materials or property.

[1] A controlled site is any site which is Government-owned or leased, or any land on which a Government-owned or leased building to be used under the contract is located.

[2] In accordance with FPR 9-7.5006-36,the Nuclear Reactor Safety clause shall be incorporated in all contracts involving the startup and/or operation of DOE-owned, non-licensed reactors, including critical facilities.



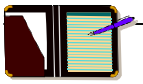
b) The development of comprehensive safety and fire prevention and protection programs covering all pertinent accident, fire, health, and sanitary phases of safety engineering. These programs shall include participation of all employees.
c) Establishment of the safety and fire prevention and protection programs through active participation by management, definite assignment of responsibilities, and establishment of operating channels.

2. Safety Staff and Organization

The contractor shall employ and adequate staff of safety specialists that is organized and coordinated to provide services required to accomplish the stated objectives. Where outside assistance may be required or justified, the plan will be clearly defined in writing. A contractor's minimum staff shall include the following, where appropriate.

a) A qualified, full-time professional. Contractors may also require a full-time safety professional if their work is especially hazardous, complex, or involves many interfaces with other organizations.
    1) Additional safety professional(s) shall be employed as determine on the bases of larger number of employees, variety and hazards of work, isolated locations, etc.
    2) Contractors who do not employ a full-time safety professional(s) shall designate as safety representative an employee in a high supervisory capacity. This employee's safety duties may be in addition to other technical or administrative duties.
b) A qualified, full-time health physicist or health physics staff at any installation where the full-time work involves risk of exposure to appreciable radiation and/or radioactivity.
c) A person(s) trained in first aid, and first aid supplies acceptable to the Medical Organization at each work location. A first aid station attended by a registered should be established for all projects employing more than 100 persons, unless excepted by RL. For larger projects, the number of nurses should be determined.
d) Such other safety specialists as may be needed to conduct an acceptable safety program.

3. Equipment and Facilities
    a) Adequate equipment and facilities shall be provided for serving and eliminating or controlling all recognized accident, fire, and health hazards.



b) Equipment and facilities shall be provided for adequately coping with emergencies such as fires, harmful atmospheric contamination, personal injuries, and extensive property damage. Equipment and facilities such as ambulances, first aid equipment, sprinklers, safety showers, and personal protective clothing shall be provided. Automatic equipment shall be provided wherever applicable and practical.

c) Facilities and equipment shall be provided and a procedure instituted for notification of designated personnel in the event of an emergency. A written plan to cope with all potential disasters shall be in effect.

4. Written Program

Each installation or prime contractor shall have a written comprehensive safety and fire prevention and protection program covering all pertinent phases of safety engineering (Attachment 4). This program shall encompass the employees of all contractors, consultants, visitors, etc., and shall be submitted to the Contracting Officer Representative for the approval of the ESH Division, at the time and in the manner prescribed. The written program shall require the contractor to:

a) Plan for the individual responsible for the direct supervision of safety activities to report to a high-ranking management official having jurisdiction over all contractor activities.

b) Provide that the contractor's safety organization help establish and direct the safety program, make surveys and inspections of plant activities and facilities to determine needs, make special studies when necessary, and assist management and supervision in any other way to carry out the safety program.

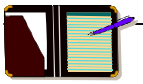
c) Assign to the contractor's safety organization the necessary authority to review and recommend changes in all conditions and practices that affect the safety and health of employees or the protection of property.

d) Integrate safety engineering in all planning and design for new construction, and changes or alteration to existing facilities.

e) Notify the DOE-RL ESH Division of all new subcontracts and work so that timely adjustment can be made in the safety programs to adequately handle the additional activities.

f) Ensure the review of all safety equipment specifications by the contractor's safety organization before procurement, and provide an effective system of convenient issue and maintenance of safety protective equipment.

g) Establish programs for complete and regular safety inspections, tests, and evaluations of all equipment, machines, and tools--particularly such items as alarms, interlocks, radiation



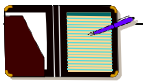
monitoring devices, pressure vessels, high-pressure lines, acid lines, elevators, cranes, hoists, automotive equipment, hand tools, pressure gages, safety valves, etc.

h) Establish inspection procedures to identify and eliminate unsafe physical conditions and to discover and correct unsafe acts which might lead to accidents.
i) Provide protection of health, equipment, property, and the environment though enforcement of practices and procedures prescribed by DOE or the contractor.
j) Provide service to determine hazards within the scope of industrial hygiene, and adopt measures for the elimination or control of those hazards.
k) Conduct a health physics program which includes the radiation safety of personnel and property through the application of the "as low as reasonably achievable" (ALARA) principle.
l) Use findings and conclusions of thorough accident investigations to develop improved safety policies and procedures.
m) Act to correct hazards identified by employees, ID representatives, or by any other people or agency.
n) Prepare and submit accurate, complete, and timely accident and injury reports and summaries.

5. Safety Education and Training

The contractor shall conduct a program of education and training to include the following (Attachment 5):

a) Supervision's integration of safety with work assignments.
b) Safety as an important part of orientation.
c) Safety in job instruction.
d) The use of periodic safety meetings. The safety organization shall assist supervision with safety meetings by providing suitable information, and shall determine the adequacy of presentation.
e) Proper operation of equipment and use of personal protective equipment.
f) Written procedures which provide for safe practices.
g) Location and use of safety and first aid fire fighting equipment.
h) First aid training for certain occupations, such as electrical line workers.
i) Procedures for turning in alarms and reporting emergencies.
j) Emergency procedures.
k) Procedures for reporting and investigation accidents and injuries.
l) Emergency brigade activities.
m) Promotion of off-the-job safety.
n) Use of safety posters, newsletters, etc.



References:

- 29 CFR Part 1910, "OSHA Safety and Health Standards"
- 29 CFR Part 1926, "Safety and Health Regulations for Construction"
- DNFSB Recommendation 93-3
- DNFSB Recommendation 95-2
- DOE M 411.1-1 "Manual of Safety Management, Functions, Responsibilities, and Authorities"
- DOE P 450.4
- ISO 14001"Environmental Management System."

Related Chapters:

- Chapter 2, "Codes and Standards."
- Chapter 3, "OSHA"
- Chapter 5, "Construction and Demolition."
- Chapter 15, "Industrial Hygiene; General"
- Chapter 16, "Industrial Hygiene; Factors."
- Chapter 17, "Safety Inspection Checklist."

Attachments:

- Attachment 1: *Accident Records & Maps*
- Attachment 2: *Traffic Complaint Investigation Form*
- Attachment 3: *Contractor Safety Policies*
- Attachment 4: *Safety and Fire Prevention & Protection Program Records*
- Attachment 5: *Safety Education and Training Records*

Attachment 1:
Accident Records & Maps

Please insert copies of accident records and maps following this page or indicate the location of these documents at your facility in the form below.

Facility Name:		
Accident Records/Maps Location:	**Initial:**	**Date:**

Attachment 2:
Traffic Complaint Investigation Form

Please insert a copy of the form used at your facility to document traffic complaint and investigations following this page or indicate its location in the form below.

Facility Name:		
Investigation Form Location:	**Initial:**	**Date:**

Attachment 3:
Contractor Safety Policies

Please insert copies of all facility specific contractor safety policies following this page or indicate the location of these documents on the form below.

Facility Name:		
Contractor Safety Policy Location:	**Initial:**	**Date:**

Attachment 4:

Safety and Fire Prevention & Protection Program Records

Please insert a copy of the applicable safety and fire prevention and protection program following this page or indicate the location of this document(s) on the form below.

Facility Name:		
Program Records Location:	**Initial:**	**Date:**

Attachment 5:
Safety Education and Training Records

Please insert a copy of applicable safety education and training records following this page or indicate the location of these records on the form below.

Facility Name:		
Training Records Location:	**Initial:**	**Date:**